

Title: Jock O’Clock’s Time Sports Complex

Brief Overview:

This unit is comprised of lessons intended to provide students with knowledge of finding start time, elapsed time, and end time. Jock O’Clock is the main character throughout this sports based thematic unit. Students will help Jock O’Clock determine the amount of time that has passed to the nearest five minutes through interactive games and lessons. Students will be expected to count forward and backward on analog and digital clocks, and to distinguish between start time, elapsed time, and end time when solving story problems.

NCTM Content Standard:

Apply appropriate techniques, tools, and formulas to determine measurements

- Select and apply appropriate standard units and tools to measure length, area, volume, weight, time, temperature, and the size of angles

Grade/Level:

Grades 3 and 4

Duration/Length:

3sessions; 60 minutes per session

Student Outcomes:

Students will:

- determine start time, elapsed time, and end time
- read, interpret, and apply knowledge of analog and digital clocks
- solve story problems involving time

Materials and Resources:

Day 1

- Math Journals
- Individual student clocks
- Enlargement of teacher resource “Jock O’Clock”
- Teacher resource “Jock O’Clock Time Rap”
- Student resource “Passing Time Spinner”
- Paper clip per pair needed for “Passing Time Spinner”
- Teacher resource “How Long Has It Been?”
- Student resource “Elapsed Time Pinch Cards”
- Student resource “Skip Counting Chart”
- Student resource “Shooting Hoops”

Day 2

- Individual student clocks
- Enlargement of teacher resource “Jock O’Clock”
- Student resource “Jock O’Clock Time Rap”
- Teacher resource “Do You Remember the Time?”
- Student resource “Play Ball” End Time board game
- One die and 3 different color counters for game board pieces
- Student resource “Play Ball Game Instructions”
- Student resource “Play Ball Game Cards”
- Student resource “Time Concentration Card Game”
- Teacher resource “Time Concentration Card Game Directions”
- Student resource “Additional End Time Practice”
- Teacher resource “Telling Timeline”
- Teacher resource “Short Hand and Long Hand Overlays”
- Student resource from Day 1 “Skip Counting Chart”
- 5 two-color counters per pair of students
- Student resource “Approaching the Finish Line”
- Student resource “Day 2 End Time Assessment”

Day 3

- Individual student clocks
- Enlargement of teacher resource “Jock O’Clock”
- Teacher resource “Jock O’Clock Time Rap”
- Teacher resource “Time Number Cards”
- 2 objects of varying lengths to represent the minute and hour hands (Ex. Baseball bats, rulers, etc.)
- 1 ball (tennis ball, soft ball, golf ball, etc.)
- Student resource “Favorite Sport Activity”
- Student resource “Favorite Sport Activity Cards”
- Student resource “Additional Start Time Practice”
- Student resource “Crazy Aerobic Workout”
- Student resource “Jock O’Clock Elapsed Time” Summative Assessment

Development/Procedures:

Day 1

Pre-assessment

Reproduce the following story problem on the board or place a copy in individual student math journals:

Jock O’Clock practices football each Monday and Wednesday beginning at 3:15 p.m. Coach Time has his players practice for 1 hour and 45 minutes each practice. What time will Jock O’Clock finish football practice?

Students will write a response to the following word problem in their math journals or another comparable source. Tell students that they will revisit student responses to the word problem at the end of Session 3, Day 3. An answer key is provided.

Engagement

- Introduce students to teacher resource “Jock O’Clock.” Explain to students that Jock O’Clock will be a great helper in assisting us with learning how to calculate elapsed time.
- Present teacher resource “Jock O’Clock Time Rap” with student participation. Briefly elicit student responses of prior knowledge of time prior to beginning the rap. You may elect to play music in the background to accompany the rap in addition to selecting student leaders to lead the rap.

Exploration

Students will work with a partner to play an elapsed time game “Passing Time Spinner Game” using individual clocks. Each pair will share a paper clip and pencil to use as a spinner. Each student will show 12:00 p.m. on his/her clock to begin the game. Students will take turns spinning the spinner and moving the hands on their clock according to the directions on the spinner. Circulate throughout the classroom taking anecdotal records to determine student knowledge of elapsed time. At the end of the activity, the student with the latest time will be the winner.

Explanation

- Begin with student explanations from today’s Exploration. Ask questions to stimulate student’s thinking. Sample questions may include:
 1. Did you move the hands on your clock in the same direction for each round of play? Why or why not?
 2. What prior knowledge did you need to know in order to play this game?
 3. Did you use any math vocabulary when playing this game? If so, which terms did you use?
- Explain how to find elapsed time using digital and analog clocks. Discuss the following ideas with the students.
 - Elapsed time tells the amount of time that has passed.
 - When finding elapsed time involving minutes and hours, it may be easier to count the hours first.
 - Finding the elapsed time can often be found using traditional addition and subtraction algorithms when the minute answers are less than 60 minutes.

For example: Start time: 6:15 End Time: 6:55

$$6:55 - 6:15 = 6:40$$

Application

- Display teacher resource “How Long Has It Been?”
- Students will respond to the story problems using student resource “Elapsed Time Pinch Cards.” Each student should receive an individual pinch card. An answer key is provided.

Differentiation**Reteach**

Select students who need help finding the elapsed time using skip counting. Each student will be given student resource “Shooting Hoops” to discover the elapsed time. Students requiring help with skip counting can use the student resource “Skip Counting Chart.” Students should start with hours and then minutes. An answer key is provided.

Enrich

Students will create word problems which involve finding the start time when a finish time and duration time is given. Students will exchange papers with a partner to solve individually created word problems in addition to providing partner feedback.

Assessment

Students will write their own verse to the “Jock O’Clock Time Rap” modeled after Paragraph 2 of the rap. Early Finishers can rewrite Paragraph 3 of the rap using elapsed time that includes hours and minutes.

Day 2**Engagement**

- Begin with “Jock O’Clock Time Rap” with student participation.
- Give each student a card from student resource “Do You Remember the Time?” to solve as a review of yesterday’s lesson. Two answer locations (Less than 2 Hours or More than 2 hours) will be designated in the classroom. If the student’s problem solving answer is less than 2 hours they will stand in the less than 2 hours location of the room. If the student’s problem solving answer is more than 2 hours they will stand in the more than 2 hours location of the room. A brief discussion may follow. An answer key is provided.

Exploration

- Students will explore finding the end time by playing the student resource “Play Ball” end time board game. Students will also need student resource “Time to Play Ball Game Board.” See student resource “Play Ball Game Instructions” for directions.
- While students are playing the game, circulate throughout the room taking anecdotal notes to assess student knowledge of finding the end time.

Explanation

- Encourage students to discuss their experiences while playing the game, “Play Ball.”
- Using today’s exploration, ask questions to stimulate student’s thinking. Sample questions may include:
 1. What skills were needed to play this game?
 2. Did you use an individual clock to assist in playing the game? If so, how was the clock helpful? If not, what method did you use to move from one clock to the next using the information from the playing cards?
 3. Did you use any math vocabulary when playing this game? If so, which terms did you use?
- Explain how to find the end time using digital and analog clocks. Students need to count forward to find the end time. Counting forward on the clock can be done by moving the hour hand forward by 1s and the minute hand forward by 5s.
- Demonstrate an example of counting forward past the hour. For example: The start time is 3:45 a.m. and the elapsed time is 20 minutes. What is the end time? In this example, demonstrate using the analog clock. Ask students to notice what happens when the minute hand passes the hour (When the minute hand counts forward past the hour, the start time hour increases by 1).

Application

Students will work with a partner to explore finding the end time by playing student resource “Time Concentration” card game. Students will match start and elapsed time cards with an end time card. See teacher resource “Time Concentration Directions.”

Differentiation

Reteach

Based on your observation and notes select students who need reteaching. Students will work with you to complete student resource “Additional End Time Practice” using student resource “Telling Timeline.” Provide each student with student resource “Short and Long Hand Overlays” to assist with distinguishing between the minute and hour hands and how to count with the hands on the clock to find the start time. Each student will use one short and one long hand overlay. The overlays should be folded along the dotted lines and then taped together. The student will insert the short hand overlay on top of the hour hand on his/her clock and the long hand overlay on top of the minute hand on his/her individual clock. The hour hand reads “Hour (1s)” to remind students which hand is the hour hand and to count the hours by 1s. The minute hand reads

“Minute (5s)” to remind students which hand is the minute hand and to count the minutes by 5s when finding time to the nearest five minutes. You may continue to provide students a student resource “Skip Counting Chart” from Day 1 if needed. An answer key is provided.

Enrich

Students will demonstrate knowledge of finding the end time by using two-color counters to represent hours and minutes when adding elapsed time to start time on individual clocks. Students will work in pairs to complete student resource “Approaching the Finish Line.”

Assessment

Provide students with student resource “Day 2 End Time Assessment.” Students will be given a master clock with individual elapsed time clocks. Students will draw hands on analog clocks and record the time on digital clocks to show ending times of triathlon events underneath the appropriate clock. An answer key is provided.

Day 3

Engagement

- Begin the lesson with “Jock O’Clock Time Rap” with student participation.
- Use teacher resource “Time Number Cards” to create a human clock on the classroom floor with the students to review start and end time. Select two like objects of varying lengths to represent the minute and hour hands(i.e. two bats, two rulers, etc.) and a ball (tennis ball, softball, etc.).
- Place the numbers 1-12 on the floor in a circular formation to create your clock.
- Select one student to stand in the center of the clock with the shorter object (bat, ruler, etc.) to represent the hour hand.
- Select another student to stand in the center of the clock with the longer object to represent the minute hand.
- The student holding the ball will walk along the outside of the clock in representation of elapsed time. Keeping with the sports theme, be sure to tell the minute and hour hands to keep their eye on the ball. The student with the ball will stand near the hour hand when counting hours and by the minute hand when counting minutes. Each time the ball moves the minute and/or hand will move forward or back to the next number depending on the question.

For example: Start Time: 6:35 p.m. Elapsed Time: 20 min. Find the end time. The minute and hour hands will move themselves to show 6:35. Next the student with the ball has to decide where to begin beside the hour hand or minute. Since we are counting minutes the student should begin outside of the number 7 on the clock where the minute hand student should be pointing toward. The student with the ball will move and count by 5s until the elapsed time of 20 minutes is reached. When all motion has ceased, ask a volunteer to name the end time.

Switch students and repeat the activity.

More examples:

1. End time: 4:55 a.m. Elapsed time: 1 hr. 40 min. Find the start time.
2. Start time: 3:20 p.m. Elapsed time: 2 hrs. 10 min. Find the end time.
- 3.*End time: 6:30 a.m. Elapsed time: 3 hrs. 35 min. Find the start time.

Please note that in rare instances the hour and minute hands will have to move at the same time.

Exploration

- Place the following story problem on the board or on chart paper for students to solve with a partner. Give each student an individual clock to assist in problem solving.

The Orioles have to be in Cleveland at 5:00 p.m. for a baseball game. The bus trip from Baltimore to Cleveland is 6 hours. What time should the Orioles board the bus in order to be on time to play against Cleveland? Explain how you determined answer.

- While students are problem solving, circulate throughout the room taking anecdotal notes to determine student knowledge of finding the start time.

Explanation

- Begin with student explanations from today's Exploration.
Ask questions to stimulate student's thinking. Sample questions may include:
 1. Explain how you counted to find the answer to the word problem.
 2. Is there another method you could have used to solve the problem?
 3. Did you use an individual clock to assist in solving the word problem? If so, how was the clock helpful? If not, what method did you use to move from one clock to the next using the information from the playing cards?
 4. Did you use any prior knowledge or math vocabulary when solving the word problem? If so, give examples.
- Explain how to find start time using digital and analog clocks.
Points to Highlight in Instruction:
Finding the start time asks for students to count backwards. Counting backwards on the clock can be done by moving the hour back by 1s and the minute back by 5s. Please note the connection of finding the start time being the reverse of yesterday's lesson of finding the end time.
- Demonstrate an example of counting backward past the hour. For example: The end time is 8:20 p.m. and the elapsed time is 30 minutes. What is the start time? In this example, demonstrate using the analog clock. Have students explain what happens when the minute hand passes the hour (When the minute hand counts backward past the hour, the hour which is 8:00 p.m. counts back by 1 to 7:00 p.m.).
- Provide additional examples shown below with student interaction, as needed.
End Time: 7:25 a.m. Elapsed Time: 15 min. Find the start time.

End Time: 12:15 p.m.
End Time: 3:45 p.m.

Elapsed Time: 1 hr. 20 min. Find the start time.
Elapsed Time: 2 hrs. 25 min. Find the start time.

Application

- Students will work with a partner to explore finding the start time as they complete the student resource “Favorite Sport Activity.”

Differentiation

Reteach

Select students who need more help based on your observations. Students will work with you to complete student resource “Additional Start Time Practice.” You may also provide students with a skip counting chart and student overlays from Day 1. An answer key is provided.

Enrich

Students will work with a partner to find missing start, elapsed, and end times. Provide each pair with an individual clock and a copy of the student resource “Crazy Aerobic Workout.” An answer key is provided.

Summative Assessment:

Student knowledge of start, elapsed, and end time will be assessed by completing the student resource “Jock O’Clock Elapsed Time Summative Assessment.” Questions will include 3 higher order thinking selected response items and 1 brief constructed response. An answer key is provided. After the summative assessment is completed have students revisit their journal responses from the “Day 1 Pre-assessment” making corrections as needed. Have students share orally and/or in written format the answer to the question: Has your knowledge of elapsed time changed or remained the same from the beginning to the end of this unit?

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Preassessment

Jock O'clock practices football each Monday and Wednesday beginning at 3:15 p.m. Coach Time has his players practice for 1 hour and 45 minutes each practice. What time will Jock O'clock finish football practice?

Students will write a response to the following word problem in their math journals or another comparable source. Tell students that they will revisit student responses to the word problem at the end of Session 3, Day 3.

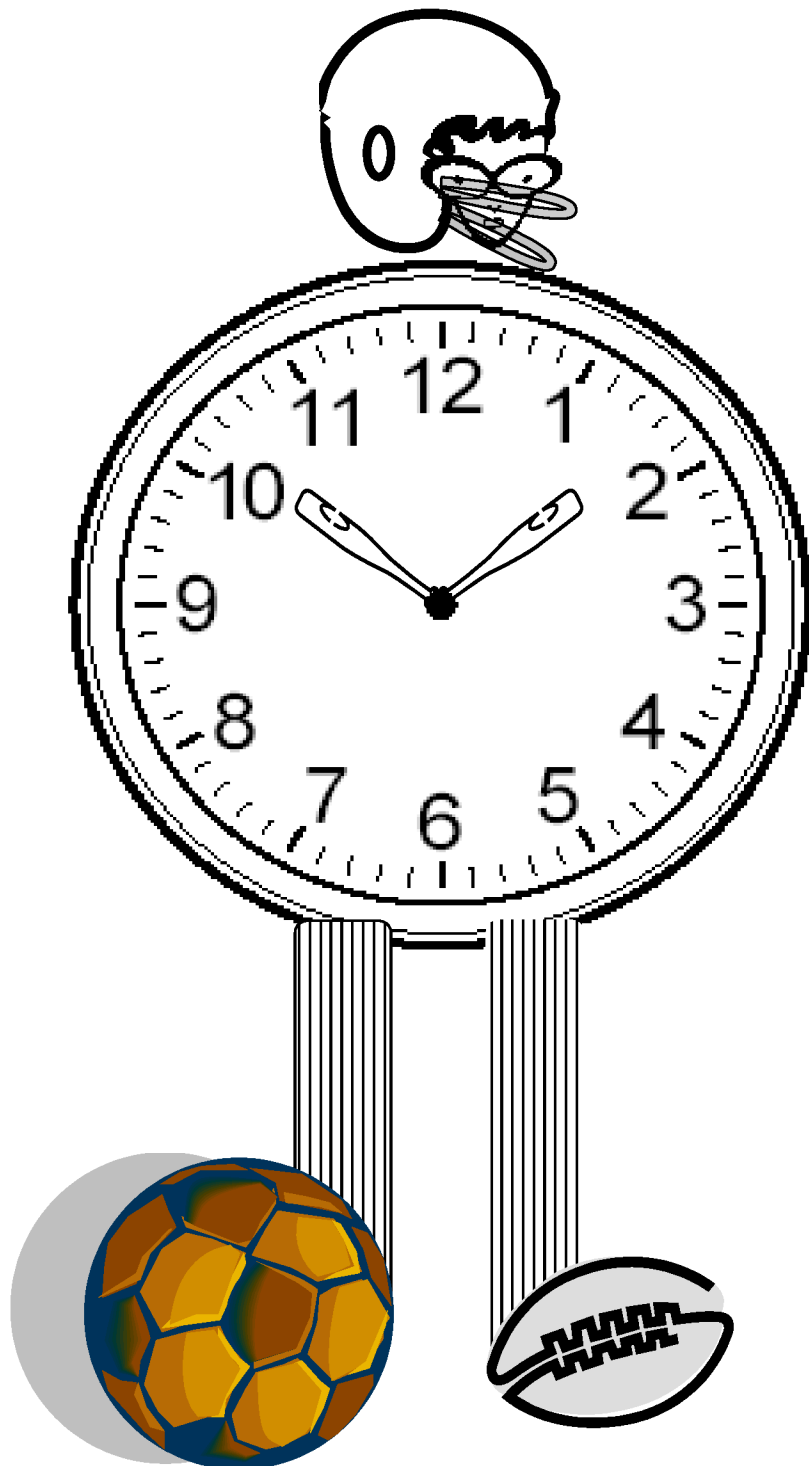
Preassessment Answer Key

Jock O'Clock practices football each Monday and Wednesday beginning at 3:15 p.m. Coach Time has his players practice for 1 hour and 45 minutes each practice. What time will Jock O'Clock finish football practice?

Students will write a response to the following word problem in their math journals or another comparable source. Tell students that they will revisit student responses to the word problem at the end of Session 3, Day 3.

The practice ends at 5:00 PM

Jock O'Clock



Jock O'Clock Time Rap

My name is Jock O'Clock.
I'm the clock that rocks the spot.
My hour hand is short and fun.
It points to the numbers on the clock and counts by one.
My minute hand counts by fives
Unless I tell you otherwise.
I'm the kind of clock that likes to rhyme.
Now let me show you how I pass the time!

Put your hands up in the air
And show me 7p.m. in the clock hemisphere.
In 15 minutes, what time will it be?
Move your minute hands like this...
5, 10, 15, See
If you're with me,
Your short hand is on 7 and your minute hand is on 3.

Put your hands up in the air
And show me 6:10 in the clock hemisphere.
In 3 hours what time will it be?
Move your hour hands like this
7, 8, 9, See
If you know what to do,
Your short hand is on 9 and your minute hand is on 2.

(You may continue to repeat this rap with students adding other times and music of your own choice in the background.)

Passing the time spinner



How Long Has It Been?

Four friends of Jock O'Clock participate in sporting events at the annual Sporting Showcase. Each event has a start time and end time. Students will use pinch cards to pinch the letter of the correct answer for each elapsed time scenario below. Students may use individual clocks to assist in finding the elapsed time.

1. Jump Rope Contest

Start Time: 11:45 a.m.

End Time: 12:15 p.m.

What is the elapsed time?

☐a. 35 minutes ☐b. 20 minutes ☐c. 1 hour ☐d. 30 minutes

2. Track Meet

Start Time: 6:05 p.m.

End Time: 9:15 p.m.

What is the elapsed time?

☐a. 3hrs. 15 min. ☐b. 3 hours ☐c. 3 hrs. 10 min. ☐d. 2 hrs. 55 min.

3. Rock Climbing

Start Time: 1:50 p.m.

End Time: 2:30 p.m.

What is the elapsed time?

☐a. 40 minutes ☐b. 55 minutes ☐c. 1 hour ☐d. 1 hr. 20 min.

4. Cheer Competition

Start Time: 7:25 a.m.

End Time: 10:40 a.m.

What is the elapsed time?

☐a. 3 hrs. 5 min. ☐b. 3 hours ☐c. 3 hrs. 15 min ☐d. 3 hrs. 20 min.

How Long Has It Been? ANSWER KEY

Four friends of Jock O'Clock participate in sporting events at the annual Sporting Showcase. Each event has a start time and end time. Students will use pinch cards to pinch the letter of the correct answer for each elapsed time scenario below. Students may use individual clocks to assist in finding the elapsed time.

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Start Time: 6:05 p.m.

End Time: 9:15 p.m.

What is the elapsed time?

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3. Rock Climbing

Start Time: 1:50 p.m.

End Time: 2:30 p.m.

What is the elapsed time?

☒ a. 40 minutes ☐ b. 55 minutes ☐ c. 1 hour ☐ d. 1 hr. 20 min.

4. Cheer Competition

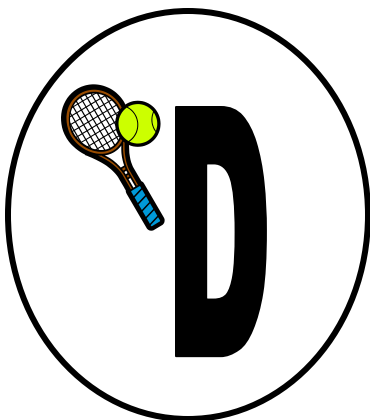
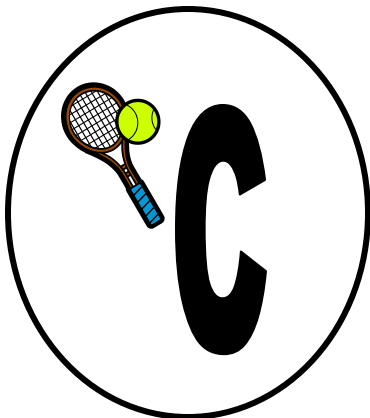
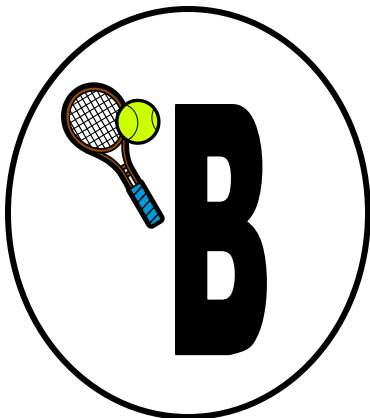
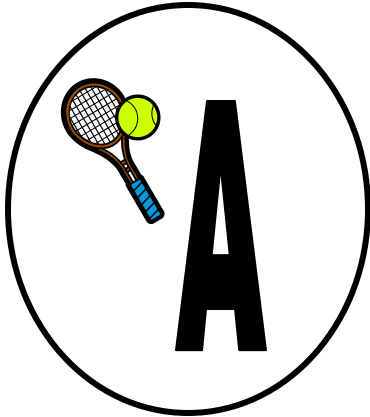
Start Time: 7:25 a.m.

End Time: 10:40 a.m.

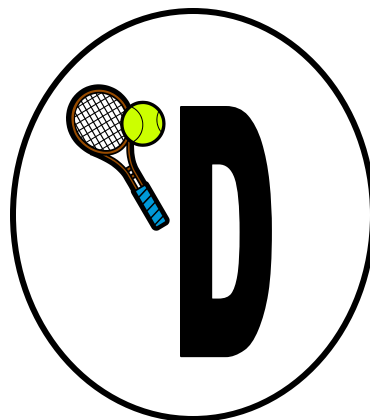
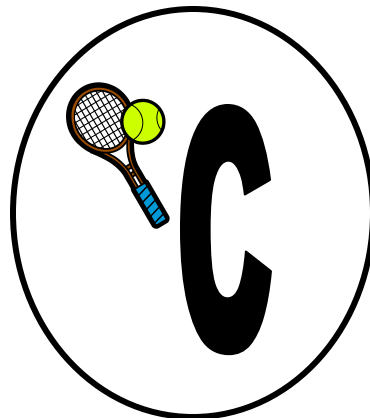
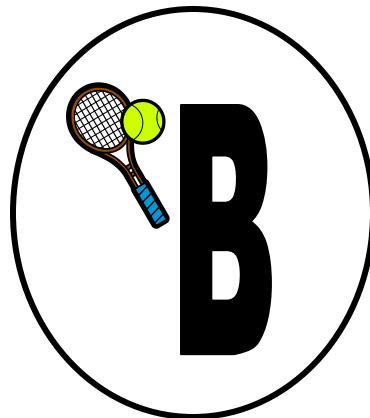
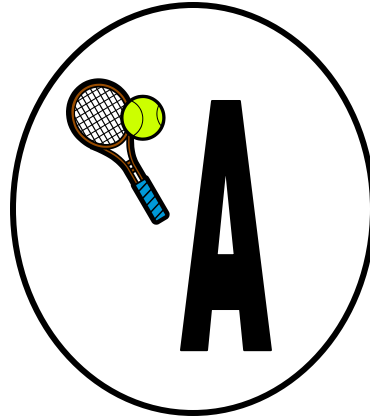
What is the elapsed time?

☐ a. 3 hrs. 5 min. ☐ b. 3 hours ☒ c. 3 hrs. 15 min ☐ d. 3 hrs. 20 min.

Elapsed Time Pinch Cards



Elapsed Time Pinch Cards



Skip Counting Chart

5	10	15	20	25
30	35	40	45	50
55				

Skip Counting Chart

5	10	15	20	25
30	35	40	45	50
55				

Shooting Hoops!



Start Time
12:15 PM

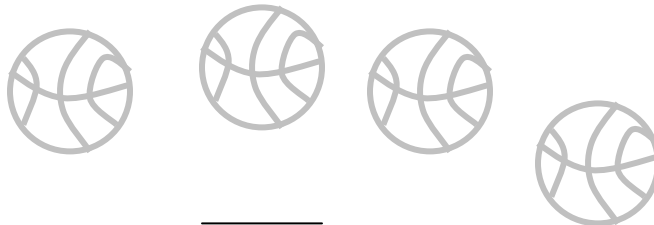


End Time
1:35 PM

Elapsed time



Start Time
2:45 AM

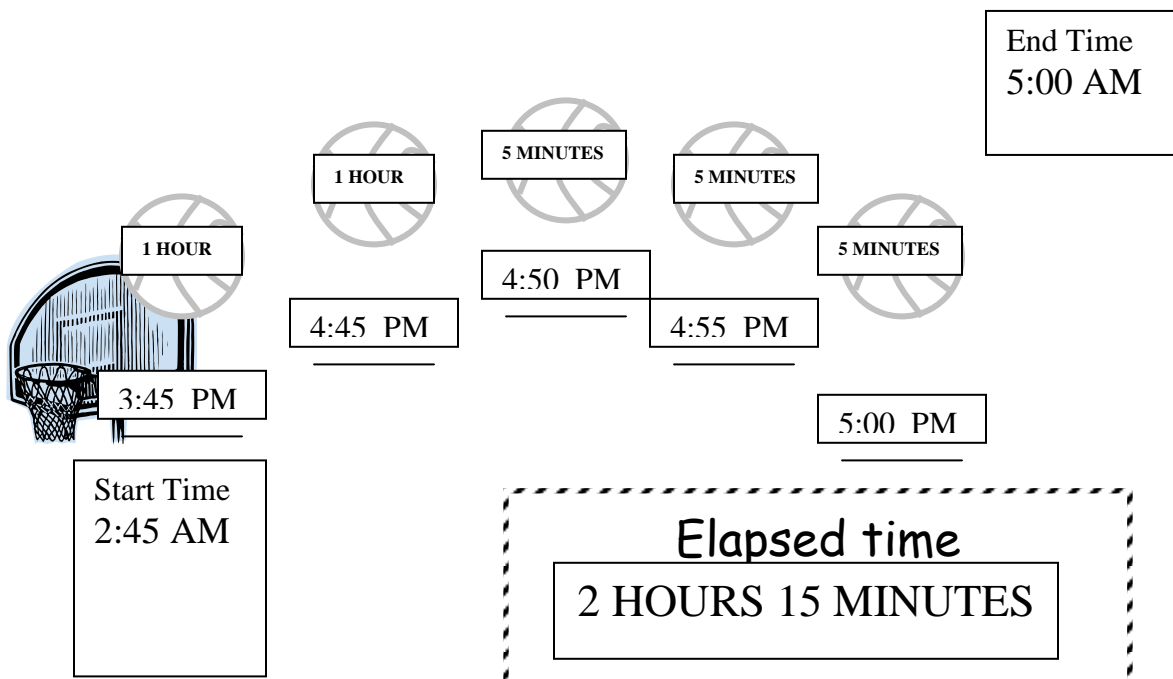
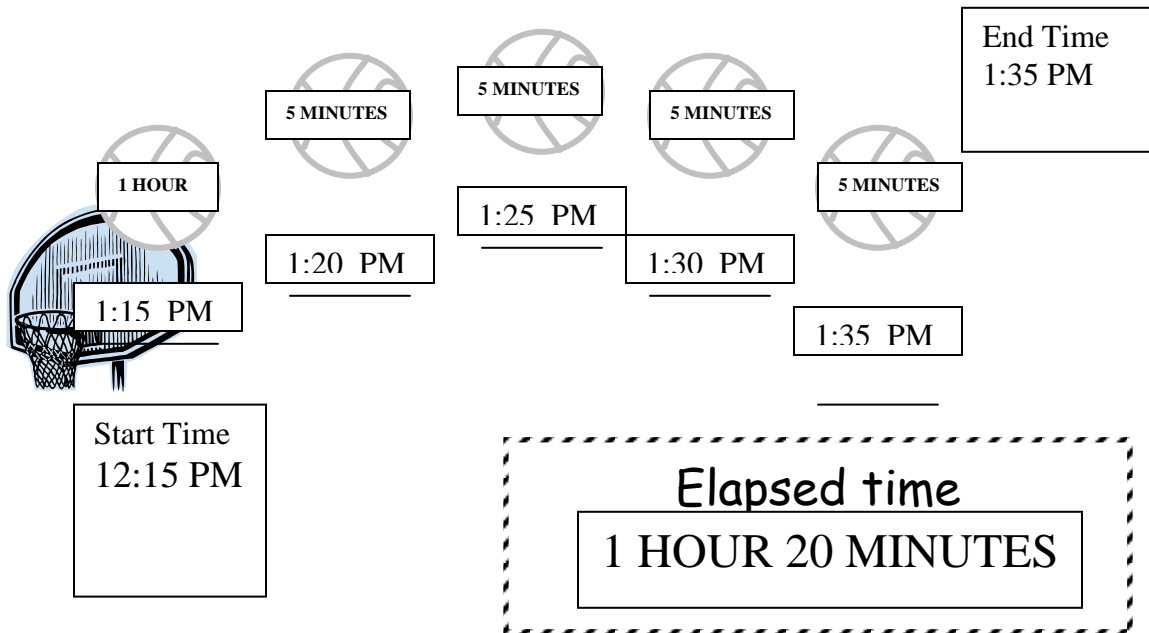


End Time
5:00 AM

Elapsed time

Shooting Hoops!

Answers will vary. Sample answers are included.



Do you remember the time?

Start Time: 7:15 AM End Time: 12:15 AM Elapsed time:	Start Time: 7:15 PM End Time: 8:15 PM Elapsed time:
Start Time: 6:45 PM End Time: 9:15 PM Elapsed time:	Start Time: 6:15 AM End Time: 12:15 AM Elapsed time:
Start Time: 8:45 AM End Time: 11:15 AM Elapsed time:	Start Time: 9:15 PM End Time: 11:30 PM Elapsed time:
Start Time: 10:30 PM End Time: 12:15 AM Elapsed time:	Start Time: 11:45 End Time: 1:15 AM Elapsed time:

Do you remember the time?

Start Time: 2:15 AM End Time: 4:15 AM Elapsed time:	Start Time: 8:30 AM End Time: 2:00 PM Elapsed time:
Start Time: 9:00 PM End Time: 11:30 PM Elapsed time:	Start Time: 7:00 AM End Time: 12:00 PM Elapsed time:
Start Time: 10:30 PM End Time: 1115 PM Elapsed time:	Start Time: 3:15 PM End Time: 11:15 PM Elapsed time:
Start Time: 4:45 AM End Time: 11:15 AM Elapsed time:	Start Time: 5:00 PM End Time: 7:30 PM Elapsed time:

Do you remember the time?

Start Time: 10:30 PM End Time: 1:15 AM Elapsed time:	Start Time: 6:45 PM End Time: 10:00PM Elapsed time:
Start Time: 3:00 AM End Time: 9:45 AM Elapsed time:	Start Time: 4:45 AM End Time: 11:30 AM Elapsed time:
Start Time: 3:30 PM End Time: 12:15 AM Elapsed time:	Start Time: 2:00 PM End Time: 3:15 PM Elapsed time:
Start Time: 1:00 AM End Time: 3:15 AM Elapsed time:	Start Time: 2:15 AM End Time: 10:15 AM Elapsed time:

Do you remember the time? Answer Key

Start Time: 7:15 AM End Time: 12:15 AM Elapsed time: 5 hours	Start Time: 7:15 PM End Time: 8:15 PM Elapsed time: 1 hour
Start Time: 6:45 PM End Time: 9:15 PM Elapsed time: 2 hours 30 minutes	Start Time: 6:15 AM End Time: 12:15 PM Elapsed time: 6 hours
Start Time: 8:45 AM End Time: 11:15 AM Elapsed time: 2 hours 30 minutes	Start Time: 9:15 PM End Time: 11:30 PM Elapsed time: 2 hours 15 minutes
Start Time: 10:30 PM End Time: 12:15 AM Elapsed time: 1 hour 45 minutes	Start Time: 11:45 End Time: 1:15 AM Elapsed time: 1 hour 30 minutes

Do you remember the time? Answer Key

Start Time: 2:15 AM End Time: 4:15 AM Elapsed time: 2 hours	Start Time: 8:30 AM End Time: 2:00 PM Elapsed time: 5 hours 30 minutes
Start Time: 9:00 PM End Time: 11:30 PM Elapsed time: 2 hours 30 minutes	Start Time: 7:00 AM End Time: 12:00 PM Elapsed time: 5 hours
Start Time: 10:30 PM End Time: 11:15 PM Elapsed time: 45 minutes	Start Time: 3:15 PM End Time: 11:15 PM Elapsed time: 8 hours
Start Time: 4:45 AM End Time: 11:15 AM Elapsed time: 6 hours 30 minutes	Start Time: 5:00 PM End Time: 7:30 PM Elapsed time: 2 hours 30 minutes

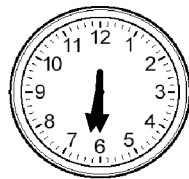
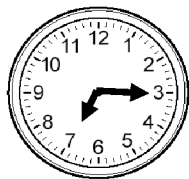
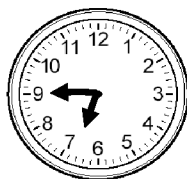
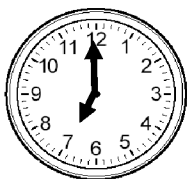
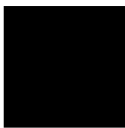
Do you remember the time? Answer Key

Start Time: 10:30 PM End Time: 1:15 AM Elapsed time: 2 hours 45 minutes	Start Time: 6:45 PM End Time: 10:00PM Elapsed time: 3 hours 15 minutes
Start Time: 3:00 AM End Time: 9:45 AM Elapsed time: 6 hours 45 minutes	Start Time: 4:45 AM End Time: 11:30 AM Elapsed time: 6 hours 45 minutes
Start Time: 3:30 PM End Time: 12:15 AM Elapsed time: 8 hours 45 minutes	Start Time: 2:00 PM End Time: 3:15 PM Elapsed time: 1 hour 15 minutes
Start Time: 1:00 AM End Time: 3:15 AM Elapsed time: 2 hours 15 minutes	Start Time: 2:15 PM End Time: 10:15 PM Elapsed time: 8 hours

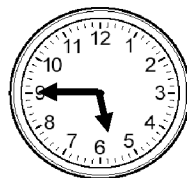
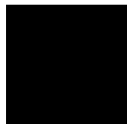
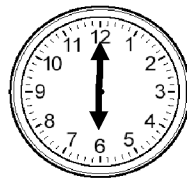
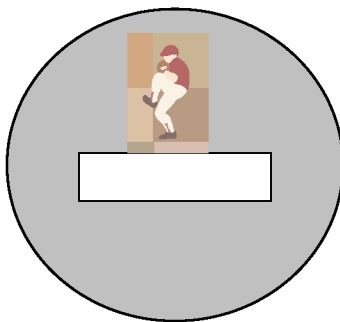
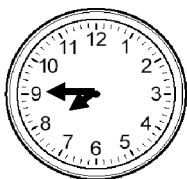
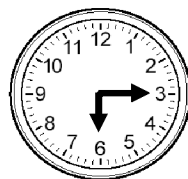
Play Ball Game Instructions

Jock O’Clock loves to play baseball in the evenings because of the cool breeze the evening air brings. This baseball game board shows clock times from 5:00 p.m. to 9:00 p.m. The goal of the game is to add elapsed time to each start time clock on the game board until a player reaches an end time of 9:00 p.m.

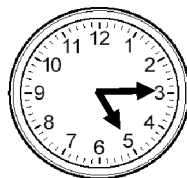
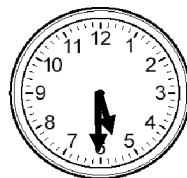
1. Players will select a marker and place the marker on the 5:00 p.m. clock on the Play Ball game board. (Ideas for markers include counting cubes and counters of 3 different colors).
2. Students will role a die to determine who goes first. The player with the highest roll will go first and the player with the lowest roll will go last.
3. Each player will select a card from the student resource “Play Ball Game Cards.” Add the amount of time on the card to the current clock start time and move to the clock on the game board that shows your end time after adding the elapsed time on the card.
4. If there is not a clock on the game board that shows the end time, the player cannot move. The player must remain on his/her current clock and lose his/her turn.
5. Repeat Step 3 until someone reaches 9:00 p.m.



**TIME
TO**



**PLAY
BALL**



FINISH

START

Play Ball Game Cards

**Work Out
Time!
Add 30
minutes!**



**You are stuck
mowing the soccer
field Add 1 hour 30
minutes.**



**Game Time!
Make your best
move on the
basketball court!
Add 1 hour.**



**Work Out
Time!
Add 30
minutes!**



**You are stuck
mowing the soccer
field Add 1 hour 30
minutes.**



**Game Time!
Make your best
move on the
basketball court!
Add 1 hour.**



**You are the flyer
for the Cheerful
Cheerleaders. You
must practice hard!
Add 45 minutes.**



**HALFTIME!
Add 15
minutes.**



**You play a long
tiring tennis
match. Add 2
hours.**



**You are the flyer
for the Cheerful
Cheerleaders. You
must practice hard!
Add 45 minutes.**



**HALFTIME!
Add 15
minutes.**



**You play a long
tiring tennis
match. Add 2
hours.**

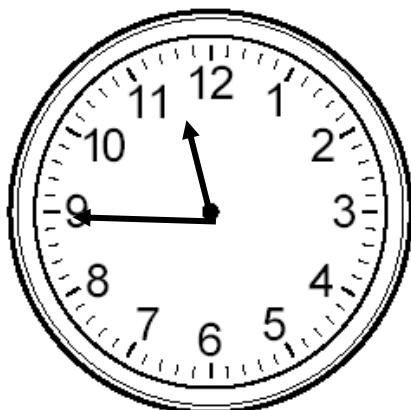


Time Concentration Card Game Directions (2-4 Players)

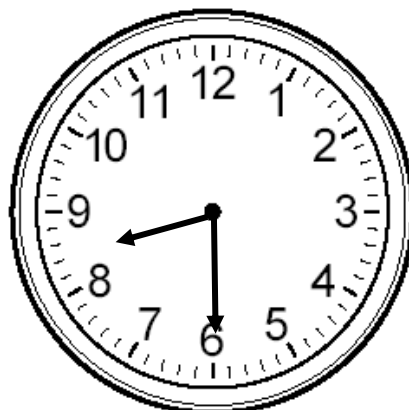
1. Players will determine starting order by the player whose last name comes first alphabetically.
2. Shuffle the Time Concentration Game Cards
3. Place each card face down on the desk or another flat surface.
4. Players are to turn over two cards during each round of play in attempts to match the Start and Elapsed time cards with the correct End time card.
5. If the cards do not match, the player must turn over the cards again and the round of play goes to the next player.
6. Each time a player finds a match; the player keeps the match and receives an extra turn.
7. Play ends when all matches have been found.
8. The person with the most matches is the winner.

Note: Students may use individual clocks to assist in finding the end time.

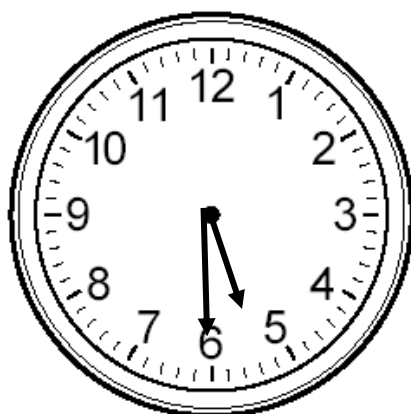
Concentration



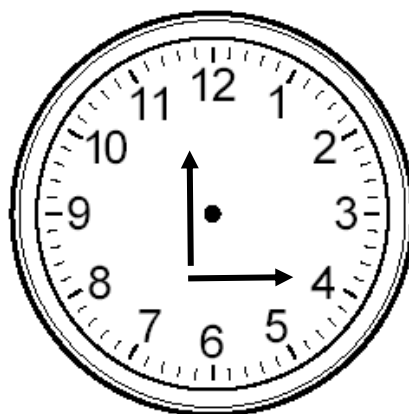
END TIME



END TIME



END TIME



END TIME

12:30

2:30

END TIME

END TIME

Concentration

7:00

1:45

END TIME

END TIME

Start time

5:00

Start time

3:15

Elapsed Time: 2 hours

Elapsed Time: 8 hours 30 minutes

Start time

8:00

Start time

12:00

Elapsed Time: 30 minutes

Elapsed Time: 1 hour 45 minutes

Concentration

Start time

1:00

Elapsed Time: 2 hours

Start time

11:00

Elapsed Time: 3 hours 30 minutes

Start time

9:00

Elapsed Time: 8 hours 30 minutes

Start time

10:15

Elapsed Time: 2 hours 15 minutes

End Time Practice

The New Orleans Saints (Jock's favorite team) are flying to New York to play the Jets on Monday Night Football. Their flight leaves the airport at 1:05 PM. Their flight will last 3 hours and 30 minutes. What time will they arrive in New York?

Jock is traveling to see the FIFA's World Cup trophy at the Spanish Embassy tomorrow. He found a bus trip that will leave at 1:00 PM. The trip will last 4 hours and 45 minutes. When will he arrive at the Embassy to see the trophy?

The President wants to give Jock O'Clock the Presidential Award for Physical Fitness! The President can only meet him at 1:00 PM. The bus company says he can leave at 9:00 AM and it is a 4 hour and 30 minute trip. The Airplane Company says he can leave at 10:30 AM and it is a 2 hour and 15 minute trip. Which company will get him there in time to meet the President for his award?

End Time Practice Answer Key

The New Orleans Saints (Jock's favorite team) are flying to New York to play the Jets on Monday Night Football. Their flight leaves the airport at 1:00 PM. Their flight will last 3 hours and 30 minutes. What time will they arrive in New York?

4:30

Jock is traveling to see the FIFA's World Cup trophy at the Spanish Embassy tomorrow. He found a bus trip that will leave at 1:00 PM. The trip will last 4 hours and 45 minutes. When will he arrive at the Embassy to see the trophy?

5:45

The President wants to give Jock O'Clock the Presidential Award for Physical Fitness! The President can only meet him at 1:00 PM. The bus company says he can leave at 9:00 AM and it is a 4 hour and 30 minute trip. The Airplane Company says he can leave at 10:30 AM and it is a 2 hour and 15 minute trip. Which company will get him there in time to meet the President for his award?

BUS-ARRIVE 1:30

PLANE-ARRIVE 12:45

BEST CHOICE PLANE

Short Hand Long Hand Overlays

HOUR (1'S)

Minute (5's)

HOUR (1'S)

Minute (5's)

HOUR (1'S)

Minute (5's)

HOUR (1'S)

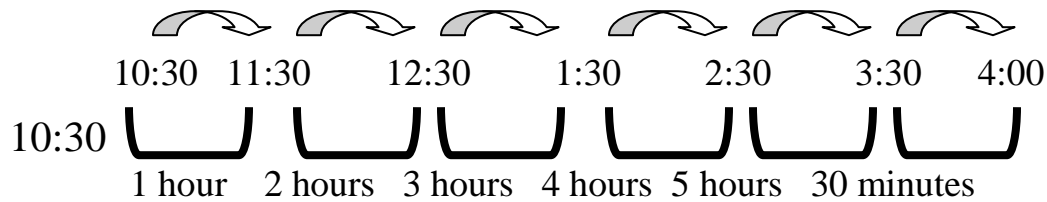
Minute (5's)

HOUR (1'S)

Minute (5's)

Telling Timeline

Jamie and Emily are going to a Jock O’Clock’s Field Hockey Camp. The camp starts each day at 10:30. The camp ends each day at 4:00. How long will they be at the Jock O’Clock’s Field Hockey Camp?

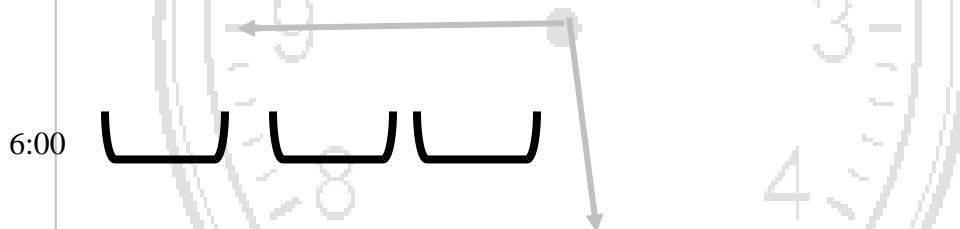


Explanation

The student will start counting at 10:30. Counting from 10:30 to 11:30 will be 1 hour. The student will count each hour until the student reaches 3:30. The remaining time is less than an hour. The student needs to determine how much time is left. In this example, the student will determine that 3:30 to 4:00 is 30 minutes. If the student adds 30 minutes to the 5 hours already counted, they will determine the elapsed time is 5 hours and 30 minutes.

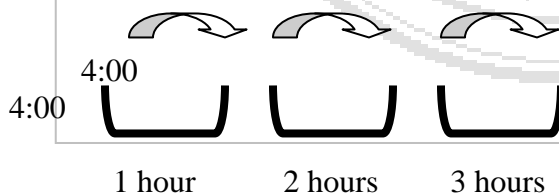
Try it yourself-----

Zach’s soccer banquet will begin at 6:00. He will leave the banquet at 8:30. How long is the banquet?



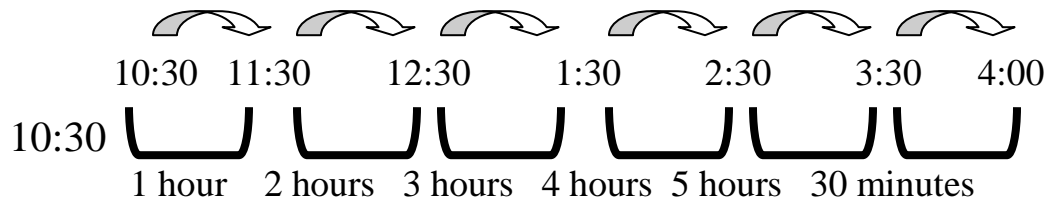
Try it a different way---

Allie and Carli have a skating party beginning at 4:00. The party is scheduled for 3 hours. What time will the party end?



Telling Timeline

Jamie and Emily are going to a Jock O’Clock’s Field Hockey Camp. The camp starts each day at 10:30. The camp ends each day at 4:00. How long will they be at the Jock O’Clock’s Field Hockey Camp?

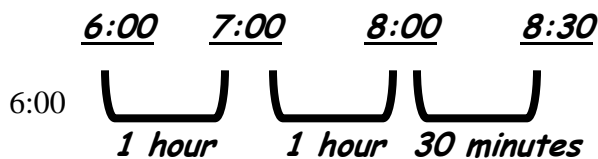


Explanation

The student will start counting at 10:30. Counting from 10:30 to 11:30 will be 1 hour. The student will count each hour until the student reaches 3:30. The remaining time is less than an hour. The student needs to determine how much time is left. In this example, the student will determine that 3:30 to 4:00 is 30 minutes. If the student adds 30 minutes to the 5 hours already counted, they will determine the elapsed time is 5 hours and 30 minutes.

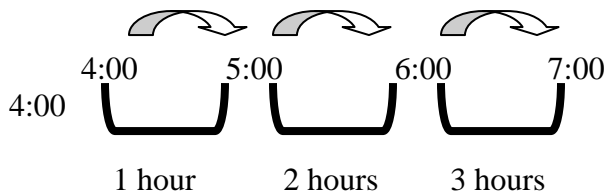
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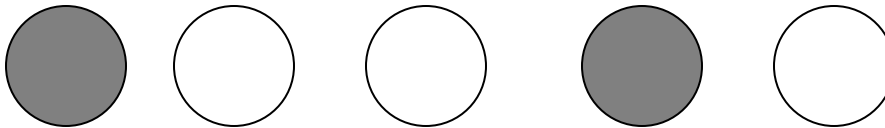


Approaching the Finish Line

Jock O'Clock is participating in a horse race that will last at least 8 hours. The race will begin at 8:00 p.m. Your job is to help Jock O'Clock finish the race by 8:00 p.m. by finding the end time.

- Step 1 Each partner should set individual clocks to 12:00 p.m. to begin the race.
- Step 2 Partner 1 tosses the 5 two-color counters in the air.
The darker side of the counters will represent 1 hour each.
The lighter side of the counters will represent 5 minutes each.
- Step 3 Add the number of hours and/or minutes represented on the counters by moving the appropriate hands on your clock to find the end time.
- Step 4 Repeat Steps 2 and 3 until one player reaches 8:00 p.m. or later.

Sample Toss:



2 dark counters at 1 hour each = 2 hours

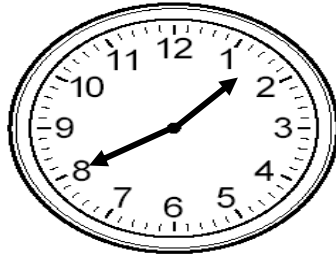
3 light counters at 5 minutes each = 15 minutes

The player with this toss would add 2 hours and 15 minutes to the current clock time.
So 12:00 p.m. would be moved to 2:15 p.m.

Name: _____ Date: _____

Day 2 End Time Assessment

Triathlon Start Time



Jock O'Clock is participating in a triathlon that starts at the time shown on the clock above. The elapsed time above the clocks below shows how much time will pass during each of Jock's events. His 1st event begins at the time shown on the above clock. Jock O'Clock performs the 2nd event immediately following the end time of the first event. He then performs the third event immediately following the 2nd event. Use the elapsed time found above the clocks to draw the minute and hour hands on each clock and to write the end time of each individual event on the digital clocks.

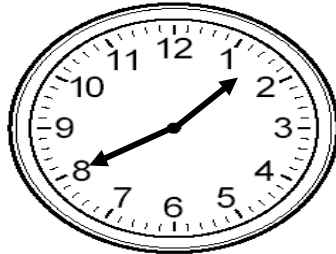
1st Event Biking Elapsed Time: 2 hours 20 minutes	2nd Event Swimming Elapsed Time: 1 hour 15 minutes	1st Event Running Elapsed Time: 2 hours 35 minutes
<div style="border: 1px solid black; width: 100px; height: 40px; display: flex; align-items: center; justify-content: center;">:</div>	<div style="border: 1px solid black; width: 100px; height: 40px; display: flex; align-items: center; justify-content: center;">:</div>	<div style="border: 1px solid black; width: 100px; height: 40px; display: flex; align-items: center; justify-content: center;">:</div>

Important Note to Remember: The end time of the 1st event is the start time of the 2nd event. The end time of the 2nd event is the start time of the 3rd event.

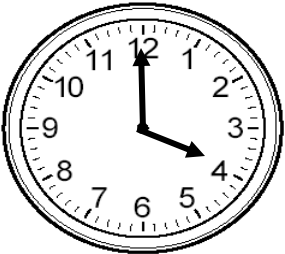
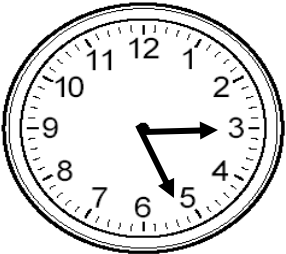
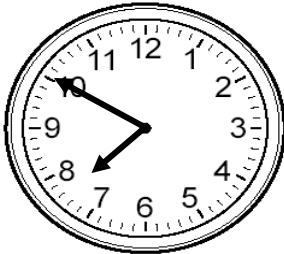
Name: _____ Date: _____

Day 2 End Time Assessment Answer Key

Triathlon Start Time



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1st Event Biking Elapsed Time: 2 hours 20 minutes	2nd Event Swimming Elapsed Time: 1 hour 15 minutes	1st Event Running Elapsed Time: 2 hours 35 minutes
		
<div style="border: 1px solid black; padding: 5px; text-align: center;">4:00</div>	<div style="border: 1px solid black; padding: 5px; text-align: center;">5:15</div>	<div style="border: 1px solid black; padding: 5px; text-align: center;">7:50</div>

Important Note to Remember: The end time of the 1st event is the start time of the 2nd event. The end time of the 2nd event is the start time of the 3rd event.

1

2

3

4

5

6

7

8

9

10

11

12

Favorite Sports Activity Directions

1. Partner students in groups of 3 labeling students as Partner A, Partner B, and Partner C. Post the following Partner Roles on a chart.
Partner A represents End Time.
Partner B represents Elapsed Time.
Partner C represents Start Time.
2. Partner A will randomly select and show the time that his/her favorite sport time ends on an individual student clock.
3. Partner B will select an elapsed time card from the “Favorite Sport Activity Cards” Student Resource.
4. Partner C will find the start time of the sport chosen by Partner A based on the end and elapsed times provided by Partners A and B.
5. Students will briefly discuss and provide any corrective feedback for Partner C’s response before switching roles.
6. Students will switch roles and repeat the activity at least 2 more times in order to allow each partner to serve as partner C.

Favorite Sports Activity Directions

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Favorite Sport Activity Cards

**Elapsed Time:
15 minutes**



**Elapsed Time:
30 minutes**



**Elapsed Time:
1 hour**



**Elapsed Time:
1 hour and
15 minutes**



**Elapsed Time:
1 hour and
30 minutes**



**Elapsed Time:
1 hour and
45 minutes**



**Elapsed Time:
15 minutes**



**Elapsed Time:
30 minutes**



**Elapsed Time:
1 hour and
15 minutes**



**Elapsed Time:
1 hour and
30 minutes**



Additional Start Time Practice

1. Jock O’Clock suffered a swollen knee while playing racquetball. He placed a bag of ice on his knee to soothe his injury for 45 minutes. It was 7:10 p.m. when Jock O’Clock removed the bag of ice from his knee. What time did Jock O’Clock place the bag of ice on his knee?
2. Coach Jock showed a video of last night’s lacrosse game to his team. The movie lasted 2 hours and 15 minutes. The players were finished watching the movie at 11:30 a.m. What time did Coach Jock begin showing the movie to his lacrosse team?
3. Jock is performing his sports rap at a school in California. His plane will arrive in California at 10:50 a.m. If the plane travels in the air for 3 hours and 20 minutes, what time did Jock’s plane depart for California?

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Additional Start Time Practice
ANSWER KEY

1. Jock O’Clock suffered a swollen knee while playing racquetball. He placed a bag of ice on his knee to soothe his injury for 45 minutes. It was 7:10 p.m. when Jock O’Clock removed the bag of ice from his knee. What time did Jock O’Clock place the bag of ice on his knee?

6:25 p.m.

2. Coach Jock showed a video of last night’s lacrosse game to his team. The movie lasted 2 hours and 15 minutes. The players were finished watching the movie at 11:30 a.m. What time did Coach Jock begin showing the movie to his lacrosse team?

9:15 p.m.

3. Jock is performing his sports rap at a school in California. His plane will arrive in California at 10:50 a.m. If the plane travels in the air for 3 hours and 20 minutes, what time did Jock’s plane depart for California?

7:30 a.m.

Crazy Aerobic Workout

EXERCISE	START TIME	ELAPSED TIME	END TIME
1. CRUNCHES	9:15	30 MINUTES	
2. PUSH UPS	10:30		11:45
3. STEP AEROBICS		1 HOUR 30 MINUTES	1:45
4. LEG LIFTS	3:15	45 MINUTES	
5.		1HOUR 15 MINUTES	
6.			

For boxes 5 and 6, select your own exercise, and complete the chart.

Crazy Aerobic Workout

EXERCISE	START TIME	ELAPSED TIME	END TIME
1. CRUNCHES	9:15	30 MINUTES	
2. PUSH UPS	10:30		11:45
3. STEP AEROBICS		1 HOUR 30 MINUTES	1:45
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5.		1HOUR 15 MINUTES	
6.			

For box 5 and 6, select your own exercise, and complete the chart.

Crazy Aerobic Workout

EXERCISE	START TIME	ELAPSED TIME	END TIME
1. CRUNCHES	9:15	30 MINUTES	<u>9:45</u>
2. PUSH UPS	10:30	<u>1 hour</u> <u>15 minutes</u>	11:45
3. STEP AEROBICS	<u>12:15</u>	1 HOUR 30 MINUTES	1:45
4. LEG LIFTS	3:15	45 MINUTES	<u>4:00</u>
5. <u>Answers will vary</u>	<u>Answers will vary</u>	1 HOUR 15 MINUTES	<u>Answers will vary</u>
6. <u>Answers will vary</u>	<u>Answers will vary</u>	<u>Answers will vary</u>	<u>Answers will vary</u>

For boxes 5 and 6, select your own exercise, and complete the chart.

Jock O'Clock Elapsed Time Summative Assessment

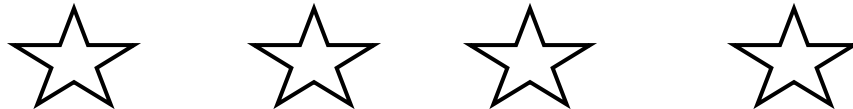
1. Four students ran 6 laps as a warm-up for track practice. The following chart shows the start and end times for each student.

Runner	Start Time	End Time
Abby	2:35 p.m.	3:05 p.m.
Carl	4:05 p.m.	4:55 p.m.
Janet	3:50 p.m.	4:10 p.m.
Fox	3:30 p.m.	4:00 p.m.

Which student finished running the 6 laps in the shortest amount of time?

- ☐ a. Abby ☐ c. Janet
☐ b. Carl ☐ d. Fox

2. Shannon is playing a bowling video game. Each time you bowl a strike a star is awarded to the player which adds 15 more minutes of play to the players bowling time. By 3:30 p.m. Shannon earned the stars shown below.



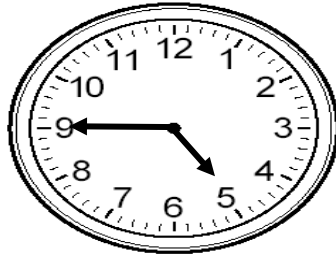
If Shannon uses all of her earned stars to continue play, what time will Shannon finish playing the bowling video game?

- ☐ a. 3:34 p.m. ☐ c. 4:15 p.m.
☐ b. 3:45 p.m. ☐ d. 4:30 p.m.

3. Paul slept for 4 hours and 30 minutes. He dreamed that his Uncle Jock won the Sports Player of the Year trophy. Paul woke up at 9:00 a.m. to tell his Uncle Jock about his dream. What time did Paul go to bed?

- ☐ a. 12:30 p.m. ☐ c. 5:30 a.m.
☐ b. 1:30 p.m. ☐ d. 4:30 a.m.

4. Jamie finished soccer practice in the evening at the time shown on the clock below. Soccer practice was 45 minutes long.



Part A

What time did Jamie's soccer practice start?

Part B

Use what you know about elapsed time to explain why your answer is correct. Use number and/or words in your explanation.

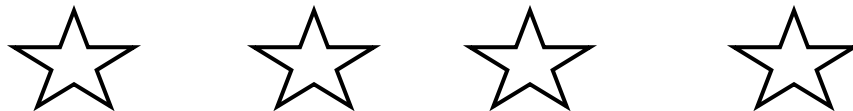
Jock O'Clock Elapsed Time Summative Assessment
ANSWER KEY

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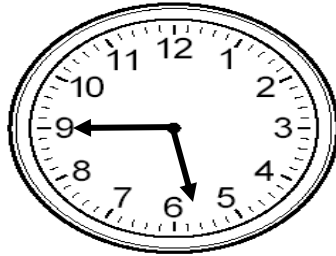
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2. Shannon is playing a bowling video game. Each time you bowl a strike a star is awarded to the player which adds 15 more minutes of play to the players' bowling time. By 3:30 p.m. Shannon earned the stars shown below.



If Shannon uses all of her earned stars to continue play, what time will Shannon finish playing the bowling video game?

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- ☐ a. 12:30 p.m. ☐ c. 5:30 a.m.
☐ b. 1:30 p.m. ☒ d. 4:30 a.m.

4. Jamie finished soccer practice in the evening at the time shown on the clock below. Soccer practice was 45 minutes long.



Part A

What time did Jamie's soccer practice start?

Answer: **5:00 p.m.**

Part B

Use what you know about elapsed time to explain why your answer is correct. Use number and/or words in your explanation.

Sample Response:

The clock above shows 5:45. Jamie practices in the evening so practice is over at 5:45 p.m. If practice is 45 minutes long, then practice began at 5:00 p.m. because 5:00 p.m. is 45 minutes less than 5:45 p.m.